

## Funding Opportunity on the Effects of Emerging Cellular, Molecular, and Genetic Technologies on Cancer Health Care Delivery (R01/R21)

### Description

To date, cancer research in the emerging field of molecular medicine has primarily focused on the discovery of novel biomarkers and therapeutic targets, and the development of innovative biotechnologies to improve cancer prevention, early detection, diagnosis, and treatment. With many of these biotechnologies still in an experimental phase, minimal attention has been paid to their likely and measured effects on health care delivery. This Program Announcement (PA) aims to stimulate and support research to improve the understanding of access, quality, and costs associated with the use of cellular, molecular, and genetic (CMG) technologies across the cancer care continuum.

Both the R01 and R21 award mechanisms will be supported by this program. Applicants for the R21 mechanism may request a project period of 2 years with a combined budget for direct costs of up to \$275,000 (no more than \$200,000 in any single year). R01 applications have no dollar limit; the project period may not exceed 3 years. This PA expires June 2, 2009.

### Research Objectives

Research topics may include, but are not limited to:

1. Patterns of care related to uptake of emerging CMG technologies and changes over time.
2. Differences in uptakes of emerging CMG technologies by health care system, within the U.S. and internationally (e.g., existence of local, national, and global health disparities in access to or use of these technologies).
3. Variances in reliability, clinical utility, and acceptability of emerging CMG technologies in community-based practice settings (e.g., effectiveness of interventions in community care differs from efficacy demonstrated in clinical trials).
4. Cost-effectiveness of CMG technologies (e.g., variance of cost effectiveness and cost utility in subgroups by genetic susceptibility, molecular characteristics of tumors, and/or combinations of genetic/molecular/behavioral/environmental risk factors).
5. Influences of emerging CMG technologies on cancer incidence, mortality, progression, survival, and quality of life.
6. Effects of emerging CMG technologies on the delivery and cost of traditional technologies, assuming additive and/or substitutive models.
7. Influences of coverage, regulation, market forces, industry marketing, and/or other environmental forces on the uptake and diffusion of emerging CMG technologies into cancer care delivery.
8. Types and impacts of system barriers on effective implementation of emerging CMG technologies in cancer health care delivery and organizational changes needed to effectively incorporate them.
9. Evolutions of standards of care and clinical practice guidelines relating to the uses of emerging CMG technologies.
10. Uptakes and successes of implementations and appropriate usages of new CMG technologies (e.g., neither over nor underused).

11. Patterns and determinants of acceptability of emerging CMG technologies to patients, providers, and other stakeholders.

12. New or modified methodologies, including modeling, to study the diffusion and impacts of emerging CMG technologies in cancer care delivery.

## Eligibility Requirements

Applicants may be from:

- For-profit organizations
- Non-profit organizations
- Public or private institutions, such as universities, colleges, hospitals, and laboratories
- Units of local governments
- Units of local Tribal governments
- Units of State governments
- Units of State Tribal governments
- Eligible agencies of the Federal government
- Domestic Institutions
- Foreign Institutions
- Faith-based or community-based organizations

## Application Procedures

A letter of intent is not required for this PA.

### For R01 applications:

Applications submitted before February 2007 must be prepared using the most current PHS 398 research grant applications instructions and forms, which are available at <http://grants.nih.gov/grants/funding/phs398/p hs398.html>. Applications must include a D&B Data Universal Numbering System (DUNS) number. Applications submitted after February 2007 must be submitted electronically.

### For R21 applications:

Applicants must submit applications electronically using the SF424 (R&R) forms and instructions available at <http://grants.gov/Apply>. Applicants should use only the forms package directly attached to this PA. No other SF424 forms will be accepted.

### For further assistance, contact:

GrantsInfo  
Tel. (301) 435-0714  
Email: [GrantsInfo@nih.gov](mailto:GrantsInfo@nih.gov)

### Application Submission Dates

<http://grants.nih.gov/grants/funding/submissionschedule.htm>

### For the full text of the PA, visit:

<http://grants.nih.gov/grants/guide/pa-files/PA-06-280.html>

and

<http://grants.nih.gov/grants/guide/pa-files/PA-06-281.html>.

## Review

Applications submitted for this PA will be assigned to NIH Institutes and Centers (ICs) on the basis of established PHS referral guidelines. Appropriate scientific review groups convened in accordance with the standard NIH peer review procedures will evaluate applications for scientific and technical merit.

## Inquiries

For questions, contact:

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